10/7 61, 906

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* * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 13:46:29 ON 16 AUG 2006

=> file biosis medline caplus wpids uspatfull
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FILE 'BIOSIS' ENTERED AT 13:47:47 ON 16 AUG 2006
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FILE 'CAPLUS' ENTERED AT 13:47:47 ON 16 AUG 2006
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FILE 'USPATFULL' ENTERED AT 13:47:47 ON 16 AUG 2006
CA INDEXING COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

*** YOU HAVE NEW MAIL ***

=> s cyanine dye? (4a) synthesis
L1          515 CYANINE DYE? (4A) SYNTHESIS

=> s l1 and py/2002
'2002' IS NOT A VALID FIELD CODE
'2002' IS NOT A VALID FIELD CODE
'2002' IS NOT A VALID FIELD CODE
'2002' IS NOT A VALID FIELD CODE
'2002' IS NOT A VALID FIELD CODE
L2            0 L1 AND PY/2002

=> s l1 and 2002/py
L3           48 L1 AND 2002/PY

=> dup rem l3
PROCESSING COMPLETED FOR L3
L4            46 DUP REM L3 (2 DUPLICATES REMOVED)

=> d l4 bib abs 1-46

L4   ANSWER 1 OF 46  BIOSIS  COPYRIGHT (c) 2006 The Thomson Corporation  on STN
AN   2002:523422  BIOSIS
DN   PREV200200523422
TI   Cyanine dyes and synthesis methods thereof.
AU   Randall, Malcolm Harry [Inventor]; Buzby, Philip Richard [Inventor];
     Erickson, Thomas Joseph [Inventor]; Trometer, Joseph David [Inventor];
     Miller, Joseph John, Jr. [Inventor, Reprint author]; Ahern, David George
     [Inventor]; Bobrow, Mark Norman [Inventor]
CS   Dracut, MA, USA
     ASSIGNEE: NEN Life Science Products, Inc.
PI   US 6437141 20020820
SO   Official Gazette of the United States Patent and Trademark Office Patents,
     (Aug. 20, 2002) Vol. 1261, No. 3. http://www.uspto.gov/web/menu/
     patdata.html. e-file.
     CODEN: OGUPE7. ISSN: 0098-1133.
DT   Patent
LA   English
```

ED Entered STN: 9 Oct 2002
Last Updated on STN: 9 Oct 2002
AB A cyanine dye having the formula ##STR1## wherein R1 -R8 are each independently selected from a group consisting of hydrogen, C1 -C6 alkyl group, and C0 -C4 alkyl group having a hydrophilic substituent thereon. R11 and R12 are chosen to include a free or protected thiol, amine or hydroxyl substituent capable of reacting with a target molecule through a nucleophilic displacement mechanism. The dye is useful in labeling a variety of target molecules. Processes are described for synthesizing suitable heterocyclic and indole derivatives as precursors for the aforementioned cyanine dyes.

L4 ANSWER 2 OF 46 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:293665 CAPLUS
DN 136:305109
TI Synthesis of fluorescent nucleobase conjugates having anionic linkers and their use in nucleic acid sequencing
IN Taing, Meng; Khan, Shaheer; Menchen, Steven; Rosenblum, Barnett
PA PE Corporation (NY), USA
SO PCT Int. Appl., 143 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002030944	A2	20020418	WO 2001-US31822	20011011 <--
	WO 2002030944	A3	20030116		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2425663	AA	20020418	CA 2001-2425663	20011011 <--
	AU 2002013125	A5	20020422	AU 2002-13125	20011011 <--
	US 2002102590	A1	20020801	US 2001-976168	20011011 <--
	US 6811979	B2	20041102		
	EP 1317464	A2	20030611	EP 2001-981488	20011011
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2004529070	T2	20040924	JP 2002-534329	20011011
	US 2005250119	A1	20051110	US 2004-977341	20041028
PRAI	US 2000-239660P	P	20001011		
	US 2001-976168	A1	20011011		
	WO 2001-US31822	W	20011011		

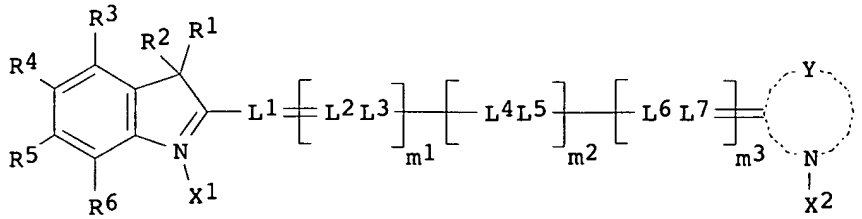
OS MARPAT 136:305109
AB Provided are nucleotide-dye conjugates and related compds. in which a dye is linked to a nucleobase directly or indirectly by an anionic linker. The anionic character of the linker is provided by one or more anionic moieties which are present in the linker, such as phosphate, phosphonate, sulfonate, and carboxylate groups. When the dye is a provided as a donor/acceptor dye pair, the anionic linker can be located between the donor and the acceptor, or between the nucleobase and either the donor or acceptor, or both. Synthetic protocols are provided for preparing various conjugates. The nucleobase-dye conjugates are suited for any method utilizing fluorescent detection, particularly methods requiring simultaneous detection of analytes which are not well separated by electrophoresis. The present invention is particularly well suited for detecting classes of polynucleotides that have been subjected to a biochem. separation procedure, such as electrophoresis. In one embodiment,

conjugates of the invention provide enhanced electrophoretic mobility characteristics to sequencing fragments, e.g., for dideoxy sequencing using labeled terminators.

L4 ANSWER 3 OF 46 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:123132 CAPLUS
DN 136:191625
TI Cyanine dyes suitable as filter or antihalation dyes in photographic elements
IN Kawakami, Masayuki; Kitaguchi, Hiroshi
PA Fuji Photo Film Co., Ltd., Japan
SO PCT Int. Appl., 65 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002012398	A1	20020214	WO 2001-JP6689	20010803 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2001076723	A5	20020218	AU 2001-76723	20010803 <--
	EP 1308480	A1	20030507	EP 2001-954430	20010803
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	US 2004054192	A1	20040318	US 2003-344273	20030910
	US 6939975	B2	20050906		
PRAI	JP 2000-240144	A	20000808		
	JP 2000-240145	A	20000808		
	JP 2000-331018	A	20001030		
	JP 2001-87914	A	20010326		
	WO 2001-JP6689	W	20010803		

OS MARPAT 136:191625
GI



nM+ I

AB The invention relates to cyanine dye compds. of the general formula I (R1, R2 = alkyl, aryl; R3-6 = H, alkyl, aryl, heteroaryl, halo, cyano, carboxyl, sulfo; X1, X2 = C1-15 alkyl, aryl, with the proviso that the total number of carboxyl groups present in X1 and X2 is four or below; m1, m2, m3 = 0, 1; L1-7 = methine; M = H, metal, quaternary ammonium salt; Y = nonmetal elements necessary for forming 5- to 10-membered heterocycle; n = 1-7 for neutralizing the charge.) or salts thereof, useful in the production

of Ag halide photog. sensitive materials as filter dyes or as antihalation dyes.

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 46 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:10316 CAPLUS
DN 136:82273
TI Use and synthesis of intramolecularly-quenched near infrared fluorescent probes
IN Weissleder, Ralph; Tung, Ching-Hsuan; Mahmood, Umar; Josephson, Lee; Bogdanov, Alexei
PA The General Hospital Corporation, USA
SO PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002000265	A1	20020103	WO 2001-US19941	20010622 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 6592847	B1	20030715	US 2000-604145	20000627
PRAI	US 2000-604145	A2	20000627		
	US 1998-79447	A2	19980514		

AB The invention concerns an intramolecularly-quenched, near IR fluorescence probe that emits substantial fluorescence only after interaction with a target tissue (i.e., activation) is disclosed. The probe includes a polymeric backbone and a plurality of near IR fluorochromes covalently linked to the backbone at fluorescence-quenching interaction-permissive positions separable by enzymic cleavage at fluorescence activation sites. The probe optionally includes protective chains or fluorochrome spacers, or both. Also disclosed are methods of using the intramolecularly-quenched, near IR fluorescence probes for in vivo optical imaging.

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 46 USPATFULL on STN
AN 2002:322365 USPATFULL
TI Process for producing polymer fine particles and lithographic printing plate precursor using the same
IN Hoshi, Satoshi, Shizuoka, JAPAN
Kawamura, Koichi, Shizuoka, JAPAN
Yamasaki, Sumiaki, Shizuoka, JAPAN
PI US 2002182529 A1 20021205 <--
US 6815137 B2 20041109
AI US 2001-28356 A1 20011228 (10)
PRAI JP 2000-401985 20001228
JP 2001-31189 20010207
DT Utility
FS APPLICATION
LREP Platon N. Mandros, BURNS, DOANE, SWECKER & MATHIS, L.L.P., P.O. Box 1404, Alexandria, VA, 22313-1404
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN No Drawings

LN.CNT 2193
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A process for producing polymer fine particles comprising: dispersing a solution obtained by dissolving a hydrophobic polymer in a solvent immiscible with water in an aqueous phase comprising fine particles of an oxide or hydroxide of at least one element selected from the group consisting of elements belonging to 2 to 15 groups in the periodic table using a surfactant; or dispersing a solution obtained by dissolving a hydrophobic polymer in a solvent immiscible with water in an aqueous phase comprising a water-soluble resin; and then removing the solvent from the oil droplets to form polymer fine particles dispersed in water.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 6 OF 46 USPATFULL on STN
AN 2002:314646 USPATFULL
TI Difference detection methods using matched multiple dyes
IN Minden, Jonathan, Pittsburgh, PA, UNITED STATES
Waggoner, Alan, Pittsburgh, PA, UNITED STATES
Fowler, Susan Janet, Buckinghamshire, UNITED KINGDOM
PI US 2002177122 A1 20021128 <--
AI US 2002-137180 A1 20020501 (10)
RLI Division of Ser. No. US 1999-370743, filed on 9 Aug 1999, PENDING
Continuation-in-part of Ser. No. US 1995-425480, filed on 20 Apr 1995, GRANTED, Pat. No. US 6127134
DT Utility
FS APPLICATION
LREP KIRKPATRICK & LOCKHART LLP, 535 SMITHFIELD STREET, PITTSBURGH, PA, 15222
CLMN Number of Claims: 45
ECL Exemplary Claim: 1
DRWN 11 Drawing Page(s)
LN.CNT 1503
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A process and a kit are provided for detecting differences in two or more samples of protein, including proteins bearing post-translational modifications and peptides. Proteins are prepared, for example, from each of a different group of cell samples or body fluid samples to be compared. Each protein extract is labeled with a different one of a luminescent dye from a matched set of dyes. The matched dyes have generally the same ionic and pH characteristics but emit light at different wavelengths to exhibit a different color upon luminescence detection. The labeled protein extracts are mixed together and separated together by electrophoresis or a chromatographic method. The separation is observed to detect proteins unique to one sample or present in a greater ratio in one sample than in the other. Those unique or excess proteins will fluoresce the color of one of the dyes used. Proteins common to each sample migrate together and fluoresce the same.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 7 OF 46 USPATFULL on STN
AN 2002:280837 USPATFULL
TI Symmetric, monofunctionalised polymethine dyes labelling reagents
IN Caputo, Giuseppe, Torino, ITALY
Della Ciana, Leopoldo, Torino, ITALY
PI US 2002156288 A1 20021024 <--
US 6747159 B2 20040608
AI US 2002-38554 A1 20020102 (10)
PRAI EP 2001-100260 20010103
DT Utility
FS APPLICATION
LREP MYERS BIGEL SIBLEY & SAJOVEC, PO BOX 37428, RALEIGH, NC, 27627
CLMN Number of Claims: 7
ECL Exemplary Claim: 1

DRWN No Drawings
LN.CNT 1167
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A symmetric cyanine of the formula: ##STR1##

wherein:

X is selected from the group consisting of O, S and C(CH.sub.3).sub.2;

W represents non-metal atoms required to form a benzo-condensed or a naphto-condensed ring;

R.sub.1 is selected from the group consisting of (CH.sub.2).sub.nCH.sub.3, (CH.sub.2).sub.nSO.sub.3.sup.- and (CH.sub.2).sub.nSO.sub.3H, wherein n is an integer selected from 0 to 6 when R.sub.1 is (CH.sub.2).sub.nCH.sub.3, and n is an integer selected from 3 to 6 when R.sub.1 is (CH.sub.2).sub.nSO.sub.3.sup.- or (CH.sub.2).sub.nSO.sub.3H;

R.sub.2 and R.sub.3 are independently selected from the group consisting of H, a sulphonic moiety and a sulphonate moiety;

Q is selected from the group consisting of: ##STR2##

wherein q is 0 or 1 and D is selected from the group consisting of: ##STR3##

wherein A is O or S and G is, or contains a N, O or S nucleophile moiety or is, or contains a moiety capable of reacting with N, O or S nucleophiles.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 8 OF 46 USPATFULL on STN
AN 2002:280671 USPATFULL
TI Receptor-avid exogenous optical contrast and therapeutic agents
IN Achilefu, Samuel I., St. Louis, MO, UNITED STATES
Rajagopalan, Raghavan, Beechwood, OH, UNITED STATES
Dorshow, Richard B., St. Louis, MO, UNITED STATES
Bugaj, Joseph E., St. Charles, MO, UNITED STATES
PA MALLINCKRODT INC., St. Louis, MO, UNITED STATES, 63134 (U.S. corporation)
PI US 2002156117 A1 20021024 <--
US 6706254 B2 20040316
AI US 2001-864011 A1 20010523 (9)
RLI Continuation-in-part of Ser. No. US 2000-484322, filed on 18 Jan 2000, GRANTED, Pat. No. US 6395257
DT Utility
FS APPLICATION
LREP David E. Jefferies, Wood, Herron & Evans, L.L.P., 2700 Carew Tower, 441 Vine Street, Cincinnati, OH, 45202-2917
CLMN Number of Claims: 20
ECL Exemplary Claim: 1
DRWN 14 Drawing Page(s)
LN.CNT 1521
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Cyanine dye bioconjugates useful for diagnostic imaging and therapy are disclosed. The conjugates include several cyanine dyes with a variety of bis- and tetrakis (carboxylic acid) homologes. The compounds may be conjugated to bioactive peptides, carbohydrates, hormones, drugs, or other bioactive agents. The small size of the compounds allows more favorable delivery to tumor cells as compared to larger molecular weight imaging agents. The various dyes are useful over the range of 350 to 1,300 nm, the exact range being dependent upon the particular dye. The

use of dimethylsulfoxide helps to maintain the fluorescence of the compounds. The inventive compounds are useful for diagnostic imaging and therapy, in endoscopic applications for the detection of tumors and other abnormalities, for localized therapy, for photoacoustic tumor imaging, detection and therapy, and for sonofluorescence tumor imaging, detection and therapy.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 9 OF 46 USPATFULL on STN
AN 2002:272641 USPATFULL
TI Fluorescent polymer superquenching-based bioassays
IN Jones, Robert M., Albuquerque, NM, UNITED STATES
Kumaraswamy, Sriram, Santa Fe, NM, UNITED STATES
Lu, Liangde, Mesa, AZ, UNITED STATES
Rininsland, Frauke, Santa Fe, NM, UNITED STATES
Ley, Kevin, Santa Fe, NM, UNITED STATES
Xia, Wensheng, Santa Fe, NM, UNITED STATES
McBranch, Duncan, Santa Fe, NM, UNITED STATES
Whitten, David G., Santa Fe, NM, UNITED STATES
PI US 2002150759 A1 20021017 <--
AI US 2002-98387 A1 20020318 (10)
PRAI US 2001-276090P 20010316 (60)
US 2001-314101P 20010823 (60)
DT Utility
FS APPLICATION
LREP Supervisor, Patent Prosecution Services, PIPER MARBURY RUDNICK & WOLFE LLP, 1200 Nineteenth Street, N.W., Washington, DC, 20036-2412
CLMN Number of Claims: 31
ECL Exemplary Claim: 1
DRWN 17 Drawing Page(s)
LN.CNT 1075
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A chemical composition including a fluorescent polymer and a receptor that is specific for both a target biological agent and a chemical moiety including (a) a recognition element, (b) a tethering element, and (c) a property-altering element is disclosed. Both the fluorescent polymer and the receptor are co-located on a support. When the chemical moiety is bound to the receptor, the property-altering element is sufficiently close to the fluorescent polymer to alter the fluorescence emitted by the polymer. When an analyte sample is introduced, the target biological agent, if present, binds to the receptor, thereby displacing the chemical moiety from the receptor, resulting in an increase of detected fluorescence. Assays for detecting the presence of a target biological agent are also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 10 OF 46 USPATFULL on STN
AN 2002:154292 USPATFULL
TI Alpha cyano methine and polymethine dyes for the labeling of biological subtrates
IN Theodoropulos, Spyros, Yorktown Hts, NY, UNITED STATES
PI US 2002078857 A1 20020627 <--
US 6617458 B2 20030909
AI US 2001-899888 A1 20010706 (9)
PRAI US 2000-216933P 20000708 (60)
DT Utility
FS APPLICATION
LREP WILLIAM R. MORAN, ESQ., 333 EAST 43RD ST. SUITE 909, NEW YORK, NY, 10017
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 337

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A new class of alpha-cyanomethine and alpha-cyanopolymethine dyes is provided having moieties which serve for the covalent attachment to biological substrates and resulting in the fluorescent labeling of the substrates. The labeled substrates are useful in analytical techniques for the detection and measurement of biological and clinical compounds of interest.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 11 OF 46 USPATFULL on STN
AN 2002:126903 USPATFULL
TI Process and method for the preparation of asymmetric monfunctionalised indocyanine labelling reagents and obtained compounds
IN Caputo, Giuseppe, Torino, ITALY
Ciana, Leopoldo Della, Torino, ITALY
PI US 2002065421 A1 20020530 <--
US 6740755 B2 20040525
AI US 2001-995350 A1 20011127 (9)
PRAI EP 2000-126019 20001128
DT Utility
FS APPLICATION
LREP MYERS BIGEL SIBLEY & SAJOVEC, PO BOX 37428, RALEIGH, NC, 27627
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN 11 Drawing Page(s)
LN.CNT 625
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A process for preparing an asymmetrical indocyanine dye comprising the steps of:

a) reacting a first quaternised indolenine or substituted indolenine with a compound of the formula (II) ##STR1##

or hydrochloride thereof,

wherein n is 0 or 1

Ph is phenyl or substituted phenyl

X is hydrogen, halogen or alkyl, preferably chlorine, in a solvent selected from the group consisting of acetic acid, acetic anhydride and mixtures thereof in the presence of acetyl chloride, to obtain an intermediate hemicyanine, and

b) further reacting said intermediate hemicyanine with a second quaternised indolenine or substituted indolenine different from said first indolenine.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 12 OF 46 USPATFULL on STN
AN 2002:84870 USPATFULL
TI Tumor-targeted optical contrast agents
IN Achilefu, Samuel I., St. Louis, MO, UNITED STATES
Rajagopalan, Raghavan, Beechwood, OH, UNITED STATES
Dorshow, Richard B., St. Louis, MO, UNITED STATES
Bugaj, Joseph E., St. Charles, MO, UNITED STATES
PA MALLINCKRODT INC., St. Louis, MO, UNITED STATES (U.S. corporation)
PI US 2002044909 A1 20020418 <--
US 6641798 B2 20031104
AI US 2001-863971 A1 20010523 (9)
RLI Continuation-in-part of Ser. No. US 2000-484320, filed on 18 Jan 2000, PATENTED

DT Utility
FS APPLICATION
LREP David E. Jefferies, Wood, Herron & Evans, L.L.P., 2700 Carew Tower, 441 Vine Street, Cincinnati, OH, 45202-2917
CLMN Number of Claims: 20
ECL Exemplary Claim: 1
DRWN 16 Drawing Page(s)
LN.CNT 1530
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Cyanine dye bioconjugates useful for diagnostic imaging and therapy are disclosed. The conjugates include several cyanine dyes with a variety of bis- and tetrakis (carboxylic acid) homologes. The compounds may be conjugated to bioactive peptides, carbohydrates, hormones, drugs, or other bioactive agents. The small size of the compounds allows more favorable delivery to tumor cells as compared to larger molecular weight imaging agents. The various dyes are useful over the range of 350 to 1,300 nm, the exact range being dependent upon the particular dye. The use of dimethylsulfoxide helps to maintain the fluorescence of the compounds. The inventive compounds are useful for diagnostic imaging and therapy, in endoscopic applications for the detection of tumors and other abnormalities, for localized therapy, for photoacoustic tumor imaging, detection and therapy, and for sonofluorescence tumor imaging, detection and therapy.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 13 OF 46 USPATFULL on STN
AN 2002:43126 USPATFULL
TI Dye complex and optical information recording medium
IN Morishima, Shinichi, Kanagawa, JAPAN
Usami, Takashi, Tokyo, JAPAN
PI US 2002025491 A1 20020228 <--
US 6506539 B2 20030114
AI US 2001-827359 A1 20010406 (9)
PRAI JP 2000-105103 20000406
JP 2000-158842 20000529
JP 2000-246405 20000815
JP 2000-258729 20000829
JP 2001-24006 20010131
JP 2001-58778 20010302
DT Utility
FS APPLICATION
LREP SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC, 2100 PENNSYLVANIA AVENUE, N.W., WASHINGTON, DC, 20037-3213
CLMN Number of Claims: 31
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 3066
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A complex of a dye cation and an anionic TCNQ derivative of the formula (I): ##STR1##

in which [Dye]+ is a dye cation, L.sup.1 is a linking group, R.sup.1 is a substituent group, p is an integer of 1-4, and r is an integer of 0-3 under the condition of 1<p+r<4, is favorably employable as a dye compound for preparing a recording layer of CD-R or DVD-R.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 14 OF 46 USPATFULL on STN
AN 2002:43123 USPATFULL
TI Heat development image forming process, thermally decoloring image recording process and process for decoloring cyanine dye
IN Sakurada, Masami, Kanagawa, JAPAN

Noro, Masaki, Kanagawa, JAPAN
Fujiwara, Itsuo, Kanagawa, JAPAN
Yabuki, Yoshiharu, Kanagawa, JAPAN
PA FUJI PHOTO FILM CO., LTD. (non-U.S. corporation)
PI US 2002025488 A1 20020228 <--
US 6465163 B2 20021015
AI US 2001-931864 A1 20010820 (9)
RLI Division of Ser. No. US 1998-175952, filed on 21 Oct 1998, GRANTED, Pat. No. US 6306566
PRAI JP 1997-306403 19971021
DT Utility
FS APPLICATION
LREP SUGHRUE MION ZINN MACPEAK & SEAS, PLLC, 2100 Pennsylvania Avenue ,NW, Washington, DC, 20037-3213
CLMN Number of Claims: 16
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1499
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A heat developable light-sensitive material comprises a support, a light-sensitive layer and a non-light-sensitive layer. The light-sensitive layer contains silver halide and a reducing agent. The non-light-sensitive layer contains a cyanine dye represented by the formula (I) or a salt thereof and a base precursor: ##STR1##

in which R.sup.1 is hydrogen, an aliphatic group, an aromatic group, --NR.sup.21R.sup.24, --OR.sup.21 or --SR.sup.21, each of R.sup.21 and R.sup.24 independently is hydrogen, an aliphatic group or an aromatic group, or R.sup.21 and R.sup.24 are combined to form a nitrogen-containing heterocyclic ring; R.sup.2 is hydrogen, an aliphatic group or an aromatic group; R.sup.3 is an aliphatic group; L.sup.1 is a methine chain consisting of an odd number of methines; and each of Z.sup.1 and Z.sup.2 independently is an atomic group forming a five-membered or six-membered nitrogen-containing heterocyclic ring. A heat development image forming process, a thermal image recording material, a thermally decoloring image recording process and a process for decoloring a cyanine dye are also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 15 OF 46 USPATFULL on STN
AN 2002:27078 USPATFULL
TI PHOTOTHERMOGRAPHIC PHOTOSENSITIVE MATERIAL AND PHOTOTHEMOGRAPHIIC METHOD
IN FUJIWARA, ITSUO, ASHIGARA-SHI, JAPAN
PI US 2002015924 A1 20020207 <--
US 6399292 B2 20020604
AI US 1999-409682 A1 19990930 (9)
PRAI JP 1998-292853 19980930
DT Utility
FS APPLICATION
LREP BIRCH STEWART KOLASCH & BIRCH LLP, P O BOX 747, FALLS CHURCH, VA, 220300747
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN 1 Drawing Page(s)
LN.CNT 2240
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A photothermographic material which contains on one side of a support (a) a catalytically active amount of a photocatalyst, (b) a reducing agent, (c) a reducible silver salt, and (d) a binder, wherein a matting agent having a softening temperature of from 100 to 500° C. is contained at least on one side of the support.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 16 OF 46 USPATFULL on STN
AN 2002:340817 USPATFULL
TI Sonodynamic therapy using an ultrasound sensitizer compound
IN Alfheim, Jan Alan, Hagan, NORWAY
    Henrichs, Paul Mark, Houston, TX, United States
    Hohenschuh, Eric Paul, Berwyn, PA, United States
    Johannesen, Edvin Wilheim, Oslo, NORWAY
    Sanderson, William Anthony, late of Wayne, PA, United States deceased
    Audrey W. Sanderson, United States executor
    Snow, Robert Allen, West Chester, PA, United States
PA Amersham Health AS, Oslo, NORWAY (non-U.S. corporation)
PI US 6498945 B1 20021224 <--
AI US 1999-435616 19991108 (9)
RLI Continuation of Ser. No. WO 1998-GB1444, filed on 19 May 1998
PRAI GB 1997-10049 19970519
    US 1997-48487P 19970603 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Shaw, Shawna J.
LREP Bacon & Thomas
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN 3 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 4412
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A method of treatment of a human or animal body by sonodynamic therapy in which a sensitizer agent is administered to the body and the body is exposed to ultrasound to achieve a cytopathogenic effect at a site therein, wherein the said sensitizer agent is a physiologically tolerable substance which is capable of enhancing the cytopathogenic efficacy of said sonodynamic therapy. Preferably, the sensitizer agent is a water-soluble polymer compound or a conjugate thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 17 OF 46 USPATFULL on STN
AN 2002:230789 USPATFULL
TI Fluorescent cyanine labels containing a sulfamido linker arm
IN Caputo, Giuseppe, Turin, ITALY
    Della Ciana, Leopoldo, Lugo, ITALY
PA Innosense, S.r.l., ITALY (non-U.S. corporation)
PI US 6448008 B1 20020910 <--
AI US 2000-609035 20000630 (9)
PRAI EP 1999-112696 19990702
DT Utility
FS GRANTED
EXNAM Primary Examiner: Jones, W. Gary; Assistant Examiner: Souaya, Jehanne
LREP Myers Bigel Sibley & Sajovec, PA
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN 57 Drawing Figure(s); 57 Drawing Page(s)
LN.CNT 2027
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A fluorescent cyanine dye of the following general formula is disclosed: ##STR1##

    wherein:

    X.sub.1 and X.sub.2 are independently selected from the group consisting of --O--, --S--, --C(CH.sub.3).sub.2 or --C.dbd.CH.sub.2;

    Y.sub.1 and Y.sub.2 are nonmetal atoms required to form a benzo-condensed or naphtho-condensed ring; Q is a conjugated moiety that

increases the fluorescent quantum yield and the stability of the compound;

R.sub.1 and R.sub.2 are independently selected from the group consisting of H, C.sub.1-C.sub.4, alkyl, alkylensulfonic group or alkylensulfonate group wherein the alkylene group has from 1 to 4 carbon atoms; R3, R4 and R5 are independently selected from the group consisting of H, a sulfonic group, a sulfonate group, alkylensulfonic, alkylensulfonate and --SO.sub.2NH(CH.sub.2).sub.m--W--(CH.sub.2).sub.nZ, wherein alkylene has 1 to 4 carbon atoms, with the proviso that at least one of R.sub.1 to R.sub.5 contains a sulfonic or sulfonate group; W is absent or is a group selected from --SO.sub.2NH, --O--, --COO--, or --CONH--; n=0-12 and m=0-12 with the provisos that m+n≤12 and at least one of m and n≠0; and Z is, or contains a N, O or S nucleophile functionality or is, or contains a functionality capable of reacting with N, O or S nucleophiles. Nucleophile functionalities include --NH.sub.2, --OH, and --SH groups; groups capable of reacting with such functionalities include --COCl, --COOCOR, --CONHNH.sub.2, N-hydroxysuccinimido esters, --NCS, --CHO, --COCH.sub.2I, phosphoramidite and maleimido.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 18 OF 46 USPATFULL on STN
AN 2002:230583 USPATFULL
TI Perfluoro-alkyl containing dye molecules and galencial formulations
IN Licha, Kai, Falkensee, GERMANY, FEDERAL REPUBLIC OF
Becker, Andreas, Marktschwaben, GERMANY, FEDERAL REPUBLIC OF
Riefke, Bjoern, Madrid, SPAIN
Platzek, Johannes, Berlin, GERMANY, FEDERAL REPUBLIC OF
PA Schering Aktiengesellschaft, Berlin, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)
Institut fuer Diagnostikforschung, Berlin, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)
PI US 6447749 B1 20020910 <--
AI US 2000-672051 20000929 (9)
PRAI DE 1999-19948650 19990929
US 1999-158306P 19991008 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Moezie, Minna; Assistant Examiner: Wells, Lauren Q.
LREP Millen, White, Zelano & Branigan, P.C.
CLMN Number of Claims: 20
ECL Exemplary Claim: 1
DRWN 11 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 1759
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention describes galenical formulations that contain perfluoroalkyl-containing dye molecules and other perfluoroalkyl-containing substances. The new formulations are suitable as, i.a., contrast media for near-infrared diagnosis.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 19 OF 46 USPATFULL on STN
AN 2002:188223 USPATFULL
TI Difference detection methods using matched multiple dyes
IN Minden, Jonathan, Pittsburgh, PA, United States
Waggoner, Alan, Pittsburgh, PA, United States
Fowler, Susan Janet, Buckinghamshire, UNITED KINGDOM
PA Carnegie Mellon University, Pittsburgh, PA, United States (U.S. corporation)
PI US 6426190 B1 20020730 <--
AI US 1999-370743 19990809 (9)

RLI Continuation-in-part of Ser. No. US 1995-425480, filed on 20 Apr 1995, now patented, Pat. No. US 6127134
DT Utility
FS GRANTED
EXNAM Primary Examiner: Le, Long V.; Assistant Examiner: Cook, Lisa V.
LREP Kirkpatrick & Lochart LLP
CLMN Number of Claims: 39
ECL Exemplary Claim: 1
DRWN 14 Drawing Figure(s); 11 Drawing Page(s)
LN.CNT 1548
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A process and a kit are provided for detecting differences in two or more samples of protein, including proteins bearing post-translational modifications and peptides. Proteins are prepared, for example, from each of a different group of cell samples or body fluid samples to be compared. Each protein extract is labeled with a different one of a luminescent dye from a matched set of dyes. The matched dyes have generally the same ionic and pH characteristics but emit light at different wavelengths to exhibit a different color upon luminescence detection. The labeled protein extracts are mixed together and separated together by electrophoresis or a chromatographic method. The separation is observed to detect proteins unique to one sample or present in a greater ratio in one sample than in the other. Those unique or excess proteins will fluoresce the color of one of the dyes used. Proteins common to each sample migrate together and fluoresce the same.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 20 OF 46 USPATFULL on STN
AN 2002:181567 USPATFULL
TI Non-covalent bioconjugates useful for diagnosis and therapy
IN Rajagopalan, Raghavan, Maryland Heights, MO, United States
Bugaj, Joseph E., St. Charles, MO, United States
Dorshow, Richard Bradley, St. Louis, MO, United States
Achilefu, Samuel I., St. Louis, MO, United States
PA Mallinckrodt Inc., St. Louis, MO, United States (U.S. corporation)
PI US 6423547 B1 20020723 <--
WO 9951284 19991014
AI US 2000-646765 20000921 (9)
WO 1999-US7061 19990331
20000921 PCT 371 date
PRAI US 1998-80658P 19980403 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Park, Hankyel T.
LREP Limpus, Lawrence L.
CLMN Number of Claims: 30
ECL Exemplary Claim: 1
DRWN 9 Drawing Figure(s); 9 Drawing Page(s)
LN.CNT 664
AB A composition comprising non-covalent carrier-hapten bioconjugates having the formula:

HM-CM

wherein HM is a hapten molecule whose molecular weight is generally, but not always, less than 1000 Daltons and is capable of performing specific functions; CM is a carrier molecule, whose molecular weight is generally, but not always, more than 1000 Daltons and is capable of transporting the hapten to a specific site; and the dashed line is a non-covalent bond between the carrier molecule and the hapten molecule.

Preferably, the bioconjugates are formed from fluorescent dye haptens such as cyanine, indocyanine, squaraine, porphyrrins, Rose Bengal, and

methylene blue dye and carrier molecules such as methylated serum albumin, polyarginine, polyaspartic acid, polyglutamic acid, cyclodextrin, and inulin.

The bioconjugates are useful in diagnostic and therapeutic medical procedures because they are stable in vitro before being used and stable in vivo during and after use.

L4 ANSWER 21 OF 46 USPATFULL on STN
AN 2002:152384 USPATFULL
TI SNP detection
IN Arnold, Lyle, Paway, CA, United States
Theriault, Thomas, Manhattan Beach, CA, United States
Bedilion, Tod, San Carlos, CA, United States
PA Incyte Genomics, Inc., Palo Alto, CA, United States (U.S. corporation)
PI US 6410231 B1 20020625 <--
AI US 1999-259898 19990226 (9)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Jones, W. Gary; Assistant Examiner: Souaya, Jehanne
LREP Osman, Richard Aron
CLMN Number of Claims: 20
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 949
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides methods, compositions and systems for detecting multiple single nucleotide polymorphisms (SNPs) in a population of target polynucleotides in parallel in a sandwich assay employing SNP probes, capture polynucleotides and, optionally, auxiliary polynucleotides. The relative affinities of the SNP probes for the corresponding SNP regions can be increased with reagents which normalize the melting temperatures of the probes and/or by positionally facilitating interactions between the SNP probe, the SNP region, the capture polynucleotide and/or the auxiliary polynucleotides, such as through a minor groove binder. The probes may comprise a degenerate set of all possible same-sized polynucleotides and the capture polynucleotides are generally immobilized and arrayed at corresponding discrete elements in high density.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 22 OF 46 USPATFULL on STN
AN 2002:137175 USPATFULL
TI Bridged fluorescent dyes, their preparation and their use in assays
IN Singh, Rajendra, San Jose, CA, United States
Gorski, Gregory, Bryn Mawr, PA, United States
Frenzel, Gary, Mountain View, CA, United States
PA SurroMed, Inc., Mountain View, CA, United States (U.S. corporation)
PI US 6403807 B1 20020611 <--
AI US 2000-612331 20000706 (9)
PRAI US 1999-142477P 19990706 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Ceperley, Mary E.
LREP Swanson & Bratschun, L.L.C.
CLMN Number of Claims: 20
ECL Exemplary Claim: 1
DRWN 19 Drawing Figure(s); 19 Drawing Page(s)
LN.CNT 1300
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Bridged fluorescent dyes of the cyanine and squaraine families are disclosed. The dyes are useful as markers in assay techniques and offer

advantages of undergoing excitation at a common wavelength but emitting at structure dependent different wavelengths.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 23 OF 46 USPATFULL on STN
AN 2002:122238 USPATFULL
TI Dendrimer precursor dyes for imaging
IN Achilefu, Samuel, St. Louis, MO, United States
Rajagopalan, Raghavan, Maryland Heights, MO, United States
Dorshow, Richard B., St. Louis, MO, United States
Bugaj, Joseph E., St. Charles, MO, United States
PA Mallinckrodt Inc., St. Louis, MO, United States (U.S. corporation)
PI US 6395257 B1 20020528 <--
AI US 2000-484322 20000118 (9)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Raymond, Richard L.
LREP Limpus, Lawrence L.
CLMN Number of Claims: 12
ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 894
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The sensitivity and specificity of the optical modality can be enhanced by the use of highly absorbing dyes as contrast agents. Novel cyanine dyes that absorb and emit light in the near infrared region of electromagnetic spectrum are disclosed. These dyes are useful for imaging, diagnosis and therapy of various diseased states. Particularly, the molecules of the invention are useful for optical diagnostic imaging and therapy, in endoscopic applications for the detection of tumors and other abnormalities, for localized therapy, for photoacoustic tumor imaging, detection and therapy, and for sonofluorescence tumor imaging, detection and therapy.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 24 OF 46 USPATFULL on STN
AN 2002:34555 USPATFULL
TI Non-fluorescent asymmetric cyanine dye compounds useful for quenching reporter dyes
IN Lee, Linda G., Palo Alto, CA, United States
Graham, Ronald J., Pleasanton, CA, United States
Mullah, Khairuzzaman B., Union City, CA, United States
Haxo, Francis T., San Francisco, CA, United States
PA PE Corporation (NY), Foster City, CA, United States (U.S. corporation)
PI US 6348596 B1 20020219 <--
AI US 1999-357740 19990720 (9)
RLI Continuation-in-part of Ser. No. US 1998-12525, filed on 23 Jan 1998, now patented, Pat. No. US 6080868
DT Utility
FS GRANTED
EXNAM Primary Examiner: Higel, Floyd D.
LREP Pennie & Edmonds LLP
CLMN Number of Claims: 28
ECL Exemplary Claim: 1
DRWN 28 Drawing Figure(s); 16 Drawing Page(s)
LN.CNT 3607
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides asymmetric cyanine dye compounds having the general formula: ##STR1##

including substituted forms thereof, which are non-fluorescent quencher molecules. The invention further provides reporter-quencher dye pairs,

wherein the asymmetric cyanine dyes are the quenchers, polynucleotides incorporating the asymmetric cyanine dyes, and nucleic acid hybridization detection methods utilizing the dye-labeled polynucleotides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 25 OF 46 USPATFULL on STN
AN 2002:34300 USPATFULL
TI Fluorescent and DNA cleavage properties of peptide/dye conjugates
IN Thompson, Martin, Scottsdale, AZ, United States
Woodbury, Neal W., Tempe, AZ, United States
PA The Arizona Board of Regents, Tempe, AZ, United States (U.S. corporation)
PI US 6348317 B1 20020219 <--
AI US 2000-713950 20001116 (9)
PRAI US 1999-166139P 19991118 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Horlick, Kenneth R.
LREP Quarles & Brady LLP
CLMN Number of Claims: 26
ECL Exemplary Claim: 1
DRWN 13 Drawing Figure(s); 8 Drawing Page(s)
LN.CNT 1252
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A method of identifying the presence or absence of a DNA molecule in a test sample comprising a specific DNA sequence is disclosed. In one embodiment, the method comprises the steps of mixing a test sample with a peptide/dye conjugate comprising a covalently linked peptide and a dye, wherein the peptide binds to the specific DNA sequence and wherein the peptide/dye conjugate will fluoresce if the peptide is bound to the specific DNA sequence, and measuring fluorescence, wherein specific fluorescence above background level indicates that the conjugate is bound to the specific DNA sequence. In another embodiment, the present invention is a method of cleaving a specific DNA molecule and a test sample. The method comprises mixing a test sample with a peptide dye conjugate comprising a covalently linked peptide and a dye, wherein the peptide binds to the specific DNA sequence and wherein the peptide dye conjugate will cleave if the peptide is bound to a specific DNA sequence.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 26 OF 46 USPATFULL on STN
AN 2002:1336 USPATFULL
TI Efficient cyclic-bridged cyanine dyes
IN Farooqui, Firdous, Brea, CA, United States
Michael, Maged A., Placentia, CA, United States
Reddy, M. Parameswara, Brea, CA, United States
PA Beckman Coulter, Inc., Fullerton, CA, United States (U.S. corporation)
PI US 6335450 B1 20020101 <--
AI US 2000-710574 20001109 (9)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Riley, Jezia
LREP May, William H., Grant, Arnold, Hogan & Hartson LLP
CLMN Number of Claims: 40
ECL Exemplary Claim: 1
DRWN 9 Drawing Figure(s); 8 Drawing Page(s)
LN.CNT 760
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention provides cyclic-bridged dyes, particularly cyclic-bridged cyanine dyes, of the general formula: ##STR1##

In this formula, each dotted line represents carbon atoms necessary to form a fused substituted or unsubstituted aromatic ring; n=1-18; m=1-18, selected independently from n. X and Y are selected independently from the group consisting of S, O, N, CH.sub.2 and C(CH.sub.3).sub.2; at least one of said R.sub.1 and R.sub.2 comprises a sulfonic acid or sulfonate group attached to the aromatic ring; and R.sub.3 and R.sub.4 are independently selected from the group consisting of carboxyl, activated carboxyl and methyl, wherein at least one of said R.sub.3 and R.sub.4 groups is carboxylate or activated carboxylate. Methods of making and using the cyclic-bridged dyes are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 27 OF 46 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 1
AN 2003:66565 BIOSIS
DN PREV200300066565
TI Solid-phase catch, activate, and release synthesis of cyanine dyes.
AU Mason, Stephen J.; Balasubramanian, Shankar [Reprint Author]
CS University Chemical Laboratory, University of Cambridge, Lensfield Road, Cambridge, CB2 1EW, UK
sb10031@cam.ac.uk
SO Organic Letters, (November 28 2002) Vol. 4, No. 24, pp. 4261-4264. print.
ISSN: 1523-7060 (ISSN print).
DT Article
LA English
ED Entered STN: 29 Jan 2003
Last Updated on STN: 29 Jan 2003
AB Trimethine cyanine dye was synthesized by capture and activation of a hemicyanine intermediate on sulfonyl chloride resin followed by reaction and concomitant cleavage by a heterocyclic carbon nucleophile. A small array of dyes were synthesized and characterized to demonstrate the versatility of this chemistry for a number of hemicyanines and heterocyclic nucleophiles.

L4 ANSWER 28 OF 46 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:974640 CAPLUS
DN 138:206475
TI Synthesis of meso-substituted trimethine cyanine dyes and evaluation of their sensitivities in sensitized photo-polymerization
AU Kimura, Masaru; Mitekura, Hirofumi; No, Tomoko; Suzuki, Kazuyoshi
CS Department of Chemistry, Faculty of Science, Okayama University, Okayama, 700-8530, Japan
SO Bulletin of the Chemical Society of Japan (2002), 75(12), 2655-2660
CODEN: BCSJA8; ISSN: 0009-2673
PB Chemical Society of Japan
DT Journal
LA English
OS CASREACT 138:206475
AB In order to evaluate the role of a substituent in sensitivity enhancement of meso-substituted trimethine cyanine dyes as sensitizers for photopolymn., we prepared a series of 11 cyanine dyes, 3-ethyl-2-[3-(3-ethyl-3H-2-benzothiazolylidene)-2-[2-(m- or p-X-phenyl)ethenyl]-1-propenyl]benzothiazolium iodides (X = p-NMe2, p-OMe, p-Me, H, p-Cl, p-CF3, p-CN, p-NO2, m-OMe, m-Me, m-Cl). The sensitivity for photopolymn. tends to be greater for substituents with greater electron-donating ability. In the series, the sensitivity of the dye with X = p-NMe2 was 2.1 mJ/cm2 higher than that of the other dyes. The sensitivity of a similar dye having a 2-(9-julolidinyl)ethenyl group was high (1.5 mJ/cm2) and that of

a dye having a 2-(9-julolidinyl)-1-methylethenyl group was the highest (0.7 mJ/cm2) among the dyes tested.
RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 29 OF 46 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:391002 CAPLUS
DN 137:175318
TI Merocyanine dyes: self-assembled monolayers
AU Ashwell, Geoffrey J.; Paxton, Gary A. N.; Whittam, Anne J.; Tyrrel, Wayne D.; Berry, Martial; Zhou, Dejian
CS The Nanomaterials Group, Cranfield University, Cranfield, MK43 0AL, UK
SO Journal of Materials Chemistry (2002), 12(6), 1631-1635
CODEN: JMACEP; ISSN: 0959-9428
PB Royal Society of Chemistry
DT Journal
LA English
AB 4-{2-[N-(10-Thiodecyl)quinolinium-4-yl]vinyl}phenolate self-assembles on gold with a contact area of 0.35 ± 0.03 nm2 mol.-1, monolayer thickness of 1.64 ± 0.07 nm, and dielec. permittivity components of .vepsiln.r ≈ 2.8 and .vepsiln.i ≈ 0.6 at 632.8 nm, which are reduced to ca. 2.0 and 0 resp. when exposed to an acidic medium. The films undergo a change from purple (merocyanine form) to yellow (protonated form) and, by monitoring changes in the reflectance, may be used as sensors with a detection limit of <1 ppm for NH3 in a carrier gas. Langmuir-Blodgett (LB) films of the N-octadecyl analog show similar behavior but, for sensing applications, are disadvantaged because the phenolate group is adjacent to the substrate. They have a contact area and monolayer thickness of 0.46 ± 0.03 nm2 mol.-1 and 1.75 ± 0.10 nm resp., the dimensions indicating that the mols. are either less closely packed or more tilted compared with those of the self-assembled film.
RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 30 OF 46 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:805124 CAPLUS
DN 138:74696
TI New synthetic approach to aminosquarylium cyanine dyes
AU Reis, L. V.; Serrano, J. P. C.; Almeida, P.; Santos, P. F.
CS Departamento de Quimica, Universidade de Tras-os-Montes e Alto Douro, Apartado 1013, Vila Real, 5001-911, Port.
SO Synlett (2002), (10), 1617-1620
CODEN: SYNLES; ISSN: 0936-5214
PB Georg Thieme Verlag
DT Journal
LA English
OS CASREACT 138:74696
AB A novel synthesis of aminosquarylium cyanine dyes, based on the methylation of readily available squarylium dyes with Me triflate, followed by nucleophilic substitution with appropriate aliphatic amines, was disclosed. By this procedure several new aminosquarylium cyanine dyes bearing benzothiazole, benzoselenazole, and quinoline nuclei were prepared
RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 31 OF 46 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:41680 CAPLUS
DN 138:273000
TI Novel cyanine dyes: synthesis, characterization and photosensitization-structure correlation
AU Shindy, H. A.; El-Maghraby, M. A.; Eissa, F. M.
CS Department of Chemistry, Aswan Faculty of Science, Aswan, Egypt
SO Journal of the Chinese Chemical Society (Taipei, Taiwan) (2002),

49(6), 1061-1068
CODEN: JCCTAC; ISSN: 0009-4536
PB Chinese Chemical Society
DT Journal
LA English
OS CASREACT 138:273000
AB Novel furo-, thieno-, and pyrrolo[2,3-b]pyrazole cyanine dyes were synthesized. Structure-photosensitization property correlations of the dyes were examined in 95% ethanol solution by absorption spectroscopy. The chemical structure of the starting biheterocyclic compds. and their derived cyanine dyes were confirmed by elemental anal. and IR and 1H NMR spectroscopy.
RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 32 OF 46 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:477143 CAPLUS
DN 137:104352
TI Novel Cyanine Dye-Labeled Dideoxynucleoside Triphosphates for DNA Sequencing
AU Duthie, R. Scott; Kalve, Inta M.; Samols, Sui Bi; Hamilton, Scott; Livshin, Inna; Khot, Mahesh; Nampalli, Satyam; Kumar, Shiv; Fuller, Carl W.
CS Amersham Biosciences, Piscataway, NJ, 08855, USA
SO Bioconjugate Chemistry (2002), 13(4), 699-706
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
AB Single color cyanine dye-labeled (Cy 5.0 and Cy 5.5) dideoxynucleoside-5'-triphosphates, or 'terminators', containing different spacer lengths were synthesized and evaluated for efficacy in DNA sequencing methods using a modified thermally stable DNA polymerase. The single color cyanine dye terminators were formulated into two sep. sets of sequencing mixes, one for Cy 5.0 and the other for Cy 5.5, and evaluated on different automated sequencing platforms. Each set of mixes included two pyrimidine terminators with 17-atom linkers and two purine terminators with 10-atom linkers between the dye and the nucleotide. The two sets of cyanine dye-labeled terminators chosen for this cycle sequencing study produced improved band patterns with band uniformity similar to that obtained with dye-primer sequencing methods.
RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 33 OF 46 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:243163 CAPLUS
DN 137:47146
TI Synthesis and allochromism of merocyanine dye based on [60]fullerene unit
AU Xu, Ju-Hua; Li, Yu-Liang; Zhu, Dao-Ben
CS College of Chemistry and Chemical Engineering, Hunan University, Changsha, 410082, Peop. Rep. China
SO Huaxue Xuebao (2002), 60(3), 541-544
CODEN: HHHPA4; ISSN: 0567-7351
PB Kexue Chubanshe
DT Journal
LA Chinese
OS CASREACT 137:47146
AB A new title compound of merocyanine dye based on [60]fullerene unit was designed, synthesized and characterized by MALDI-TOF, FT-IR, NMR and UV-vis spectra and the allochromic processes were also studied. The title compound had allochromic processes in polar solvents such as methanol or DMF. Acids or alkali such as acetic acid or NaOC2H5 also showed apparent influence on the allochromic process. The photochromic process was much slower than that of merocyanine dye itself due to the influence of

[60]fullerene unit on the merocyanine moiety.

L4 ANSWER 34 OF 46 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:458126 CAPLUS
DN 137:186997
TI Synthesis and purification of asymmetrical water-soluble cyanine dyes
AU Lou, Kai-Yan; Qian, Xu-Hong; Song, Gong-Hua
CS Institute of Pesticides and Pharmaceuticals, ECUST, Shanghai, 200237, Peop. Rep. China
SO Huadong Ligong Daxue Xuebao (2002), 28(2), 212-215
CODEN: HLIXEV; ISSN: 1006-3080
PB Huadong Ligong Daxue Xuebao Bianjibu
DT Journal
LA Chinese
OS CASREACT 137:186997
AB Two water-soluble unsym. cyanine dyes, which can be used as fluorescence tag in DNA labeling, was synthesized from p-hydrazino-benzenesulfonic acid by 6 steps. A ternary solvent was developed and used as eluant in purification of intermediates and final dyes by PTLC method. The yields were as good as that of the HPLC method that had been reported.

L4 ANSWER 35 OF 46 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:209320 CAPLUS
DN 137:78602
TI Synthesis and photochromism of photochromic spiro compounds having a reactive pendant group
AU Zhang, Peng; Meng, Jiben; Li, Xiaoliu; Matsuura, Teruo; Wang, Yongmei
CS Department of Chemistry, Nankai University, Tianjin, 300071, Peop. Rep. China
SO Journal of Heterocyclic Chemistry (2002), 39(1), 179-184
CODEN: JHTCAD; ISSN: 0022-152X
PB HeteroCorporation
DT Journal
LA English
OS CASREACT 137:78602
AB The photochromic spiropyrans and spirooxazines having a reactive pendant group, including carboxyl, halide, succinimidyl ester and isothiocyanate, were synthesized. Their photochromic behaviors in solution and solid state were studied.
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 36 OF 46 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:593235 CAPLUS
DN 137:301482
TI Synthesis and characterization of an alkanethiol thin film containing a hemicyanine dye
AU Okawa, Haruki; Ikezawa, Hiroki; Hashimoto, Kazuhiko
CS Department of Materials Science and Technology, Faculty of Engineering, Kogalkuin University, Tokyo, 192-0015, Japan
SO Molecular Crystals and Liquid Crystals Science and Technology, Section A: Molecular Crystals and Liquid Crystals (2002), 377, 137-140
CODEN: MCLCE9; ISSN: 1058-725X
PB Taylor & Francis Ltd.
DT Journal
LA English
AB Two kinds of thiol compds. with hemicyanine dyes of di-Me and di-Bu end groups were synthesized. These formed self-assembled monolayers (SAM's) on Au surfaces. The SAM's were characterized by UV-visible reflection spectroscopy, surface plasmon resonance, and 2nd order harmonic generation measurements. The structures of the SAM's were largely affected by the end groups.
RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 37 OF 46 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:461663 CAPLUS
DN 137:371365
TI Syntheses and characterization of styryl cyanine dyes
AU Hu, Zhi-biao; Wang, Lan-ying; Dong, Fa-xin
CS Department of Chemistry, Northwest University, Xi'an, 710069, Peop. Rep. China
SO Xibei Daxue Xuebao, Ziran Kexueban (2002), 32(2), 134-136
CODEN: HPHPAQ; ISSN: 1000-274X
PB Xibei Daxue Xuebao Bianjibu
DT Journal
LA Chinese
OS CASREACT 137:371365
AB Three title compds. were synthesized. They were identified by elemental anal., IR, UV and 1HNMR. Based on UV spectral data and fluorescence spectral data, the effect of different substituents on spectral properties of the three days was presented and discussed.

L4 ANSWER 38 OF 46 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:899855 CAPLUS
DN 136:161917
TI An Efficient Binding Chemistry for Glass Polynucleotide Microarrays
AU Lee, Paul H.; Sawan, Samuel P.; Modrusan, Zora; Arnold, Lyle J., Jr.; Reynolds, Mark A.
CS Incyte Genomics, Microarray Research and Development, Fremont, CA, 94555, USA
SO Bioconjugate Chemistry (2002), 13(1), 97-103
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
AB A variety of methods have been described for making synthetic polynucleotide microarrays. These include in situ synthesis directly on the array surface, for example, by photolithog. or ink-jet printing technologies, and the application of presynthesized polynucleotides that are derivatized with various nucleophiles or electrophiles. In the latter case, a variety of surface chemistries have been developed, and several are available com. These chemistries must be compatible with nanoliter-scale vols. of polynucleotide reagents, which contact the array over a small portion of their surface. We reasoned that a three-dimensional polymer coating could potentially offer greater surface contact and higher binding efficiency. Here we describe a polyethylenimine-based coating chemical that provides exceptional binding and hybridization characteristics. In our preferred process, size-fractionated polyethylenimine polymers are cross-linked onto an aminopropylsilanated glass surface in the presence of cyanuric chloride. The resulting three-dimensional coating binds polynucleotides through a mixture of covalent and noncovalent interactions as evidenced by comparisons between 5'-aminoalkyl modified and unmodified polynucleotides. Binding and hybridization comparisons are presented including analogous two-dimensional electrophilic and electrostatic chemistries.
RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 39 OF 46 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:20957 CAPLUS
DN 136:342121
TI Novel quinone cyanine dyes: synthesis and spectral studies
AU Shindy, H. A.; El-Maghraby, M. A.; Eissa, F. M.
CS Department of Chemistry, Aswan Faculty of Science, Aswan, Egypt
SO Dyes and Pigments (2002), 52(2), 79-87
CODEN: DYPIDX; ISSN: 0143-7208

PB Elsevier Science Ltd.
DT Journal
LA English
OS CASREACT 136:342121
AB Novel dimethine, bis dimethine, and tetramethine cyanine dyes derived from benzo[4,5-b;4',5'-b']bisfuro-, -thieno-, and -pyrrolo-4,8-dione were prepared The electronic visible absorption spectra of the dyes were examined in 95% ethanol. Structural confirmation is provided by elemental anal. and IR and 1H NMR spectroscopy.
RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 40 OF 46 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:740882 CAPLUS
DN 138:74694
TI Molecular design and synthesis of light-responsive compounds by computational chemistry
AU Shigemitsu, Yasuhiro
CS Dep. Ind. Mater., Ind. Technol. Cent. Nagasaki, Omura, 856-0026, Japan
SO Nagasaki-ken Kogyo Gijutsu Senta Kenkyu Hokoku (2002), Volume Date 2001, 30, 68-72
CODEN: NGSHEU; ISSN: 0916-6726
PB Nagasaki-ken Kogyo Gijutsu Senta
DT Journal
LA Japanese
AB π-π^* Electronic transition of some merocyanine dyes was analyzed by various kinds of MO calcns. TDDTF (Time Dependent D. Functional Theory) method was found to be most promising.

L4 ANSWER 41 OF 46 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:618459 CAPLUS
TI Synthesis and application of novel near-infrared cyanine fluorochromes with sulfhydryl- and amine-reactive functiona
AU Lin, Yuhui; Weilessder, Ralph; Tung, Ching-Hsuan
CS Center for Molecular Imaging Research, MGH, Harvard Medical School, Charlestown, MA, 02129, USA
SO Abstracts of Papers, 224th ACS National Meeting, Boston, MA, United States, August 18-22, 2002 (2002), ORGN-064 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69CZPZ
DT Conference; Meeting Abstract
LA English
AB The differentiation and characterization of biol. tissues with light in the near-IR (NIR) region has been recently a hot topic in biomedical imaging and diagnosis. At the center of this promising technol. are the fluorochromes with desired properties such as biocompatibility and high fluorescent quantum yield. Though wealthy information of fluorochromes containing amine-reactive functionality is available, relative little effort was paid to the fluorochromes with sulfhydryl-reactive functionality, especially those with emission spectrum in the NIR region. In this presentation, we describe the synthesis of new non-sym. cyanine dyes with excellent optical and chemical properties. Each dye was designed to contain either iodoacetamido group which reacts specifically with sulfhydryl-containing mols. , or NHS moiety with react with amine-containing mols. These fluorochromes were applied to label peptides, proteins, oligonucleotides, targeting ligands, and polymers. In vitro and in vivo imaging of ovarian cancer with receptor-targeted probe folate-dye conjugate was performed.

L4 ANSWER 42 OF 46 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:439950 CAPLUS
DN 138:123836

TI Study on synthesis of copper phthalimidomethyl phthalocyanine
AU Su, Yanxi
CS Hebei Normal University, Shijiazhuang, 050091, Peop. Rep. China
SO Huagong Shikan (2002), 16(3), 39-41
CODEN: HUSHFT; ISSN: 1002-154X
PB Huagong Shikan Zazhishe
DT Journal
LA Chinese
OS CASREACT 138:123836
AB Copper phthalimidomethyl phthalocyanine was synthesized by dissolving Cu phthalocyanine in H2SO4 and reacting with paraformaldehyde and phthalimide. The product showed good crystallization resistance, flocculation resistance, and stable property.

L4 ANSWER 43 OF 46 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:753071 CAPLUS
DN 135:303873
TI Fluorescent labeled nucleotides, synthesis and application as probes and primers
IN Shinoki, Hiroshi; Inomata, Hiroko; Kojima, Masayoshi; Sudo, Yukio; Seshimoto, Osamu
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001288197	A2	20011016	JP 2000-107675	20000410
US 2002064782	A1	20020530	US 2001-829467	20010409 <--
EP 1152008	A2	20011107	EP 2001-107864	20010410 <--
EP 1152008	A3	20020320		
EP 1152008	B1	20050209		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRAI JP 2000-107675 A 20000410
OS MARPAT 135:303873
AB The present invention provides a fluorescent substance which is represented by a formula: A-B-C wherein A is a residue of natural or synthetic nucleotide, oligonucleotide, polynucleotide, or derivative thereof, and binds to B at a base moiety in said residue; B is a divalent linking group or a single bond; and C is a derivative of fluorescent dye having 0 or 1 sulfonate or phosphate moiety. Fluorescent dye is cyanine, melocyanine, or styryl. Preferably A is AMP, ADP, ATP, GMP, GDP, GTP, CMP, CDP, CTP, UMP, UDP, UTP, TMP, TDP, TTP, 2-Me-AMP, 2-Me-ADP, 2-Me-ATP, 1-Me-GMP, 1-Me-GDP, 1-Me-GTP, 5-Me-CMP, 5-Me-CDP, 5-Me-CTP, 5-MeO-CMP, 5-MeO-CDP, 5-MeO-CTP. B is preferably -CH2-, -CH=CH-, triple bond, -CO-, -O-, -S-, -NH-, or aminoaryl. Synthesis of labeled nucleic acids using the nucleotides via reverse transcription, terminal transferase reaction, random prime method, PCR, or nick translation, is claimed. The fluorescent substance of the present invention is useful as label for nucleic acids, reagent for detecting nucleic acids, or diagnostic reagent. Kits for nucleic acid detection are claimed. Synthesis of 8 indolenine cyanine compds. and conjugation with dUTP, and use for DNA probe preparation, are described.

L4 ANSWER 44 OF 46 USPATFULL on STN
AN 2001:150649 USPATFULL
TI Cyanine dyes and synthesis methods thereof
IN Randall, Malcolm Harry, Wayland, MA, United States
Buzby, Philip Richard, Brockton, MA, United States
Erickson, Thomas Joseph, Carlisle, MA, United States
Trometer, Joseph David, Framingham, MA, United States

Miller, Joseph John, JR., Dracut, MA, United States
Ahern, David George, Lexington, MA, United States
Bobrow, Mark Norman, Lexington, MA, United States

PI US 2001020098 A1 20010906 <--
US 6437141 B2 20020820

AI US 2001-824316 A1 20010402 (9)

RLI Continuation of Ser. No. US 1999-448242, filed on 24 Nov 1999, GRANTED, Pat. No. US 6224644 Division of Ser. No. US 1999-294678, filed on 19 Apr 1999, GRANTED, Pat. No. US 6114350

DT Utility

FS APPLICATION

LREP Gifford, Krass, Groh, Sprinkle,, Anderson & Citkowski, P.C., Suite 400, 280 N. Old Woodward Avenue, Birmingham, MI, 48009-5394

CLMN Number of Claims: 16

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 856

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A cyanine dye having the formula ##STR1##

wherein R.sub.1-R.sub.8 are each independently selected from a group consisting of hydrogen, C.sub.1-C.sub.6 alkyl group, and C.sub.0-C.sub.4 alkyl group having a hydrophilic substituent thereon. R.sub.11 and R.sub.12 are chosen to include a free or protected thiol, amine or hydroxyl substituent capable of reacting with a target molecule through a nucleophilic displacement mechanism. The dye is useful in labeling a variety of target molecules. Processes are described for synthesizing suitable heterocyclic and indole derivatives as precursors for the aforementioned cyanine dyes.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 45 OF 46 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:623740 CAPLUS

DN 133:224250

TI Cyanine dyes and synthesis methods thereof

IN Randall, Malcolm Harry; Buzby, Philip Richard; Erickson, Thomas Joseph; Trometer, Joseph David; Miller, Joseph John, Jr.; Ahern, David George; Bobrow, Mark Norman

PA Nen Life Science Products, Inc., USA

SO U.S., 12 pp.
CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

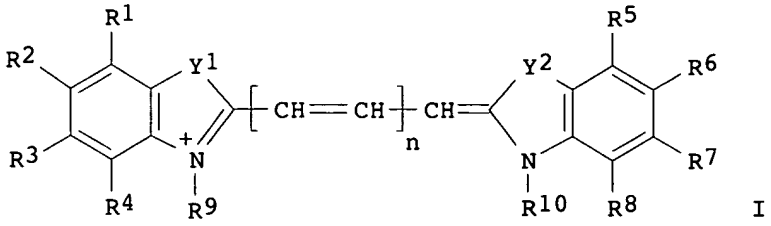
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6114350	A	20000905	US 1999-294678	19990419
	US 6197956	B1	20010306	US 1999-449333	19991124
	US 6204389	B1	20010320	US 1999-448241	19991124
	US 6224644	B1	20010501	US 1999-448242	19991124
	CA 2335240	AA	20001026	CA 2000-2335240	20000419
	WO 2000063296	A2	20001026	WO 2000-US10533	20000419
	WO 2000063296	A3	20010215		
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1112254	A2	20010704	EP 2000-923522	20000419

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

	JP 2002542365	T2	20021210	JP 2000-612377	20000419 <--
	AU 767368	B2	20031106	AU 2000-43631	20000419
	US 2001020098	A1	20010906	US 2001-824316	20010402 <--
	US 6437141	B2	20020820		
PRAI	US 1999-294678	A3	19990419		
	US 1999-448242	A1	19991124		
	WO 2000-US10533	W	20000419		

OS CASREACT 133:224250; MARPAT 133:224250

GI



I

AB Cyanine dyes (I) are prepared where R1-R8 are each independently selected from a group consisting of H, C1 -C6 alkyl group, and C0 -C4 alkyl having a hydrophilic substituent; R9 and R10 are selected from protected thiol, amine or hydroxyl substituent capable of reacting with a target mol. through a nucleophilic displacement mechanism; Y1 and Y2 = substituted C, O, N, S; and n = ≥1. The dyes are useful in labeling a variety of target mols. Processes are described for synthesizing suitable heterocyclic and indole derivs. as precursors for the cyanine dyes.

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 46 OF 46 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:190792 CAPLUS
DN 132:229444
TI Cyanine dye for photographic spectral sensitizer
IN Missfeldt, Michael; Herrmann, Stefan
PA Agfa-Gevaert A.-G., Germany
SO Eur. Pat. Appl., 23 pp.
CODEN: EPXXDW
DT Patent
LA German
FAN.CNT 1

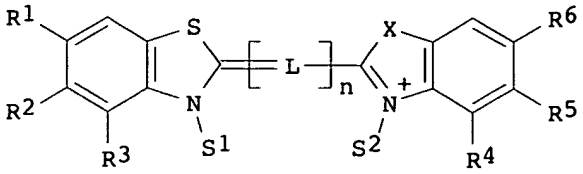
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 987302	A1	20000322	EP 1999-117401	19990907 <--
	EP 987302	B1	20021127		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

	DE 19843082	A1	20000323	DE 1998-19843082	19980919
	US 6258523	B1	20010710	US 1999-393673	19990910
	JP 2000095959	A2	20000404	JP 1999-260100	19990914
PRAI	DE 1998-19843082	A	19980919		

OS MARPAT 132:229444

GI



M I

AB The title cyanine dye is represented by a general formula I (R1-6 = H, substituent; R5 joining together with R6 may form benzene or naphthalene ring; R4 joining together with R5 may form benzene or naphthalene ring; X = O, S, Se, CH:CH, C(CH3)2, NR7; R7 = alkyl; S1, S2 = alkyl, sulfoalkyl, carboxyalkyl, etc.; n = 3, 5, 7; L = methine; M = counter ion). The photog. material shows improved spectral sensitivity.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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DICTIONARY FILE UPDATES:  15 AUG 2006  HIGHEST RN 901654-60-2

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L1      STRUCTURE UPLOADED

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L1              STR
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SEARCH TIME: 00.00.01

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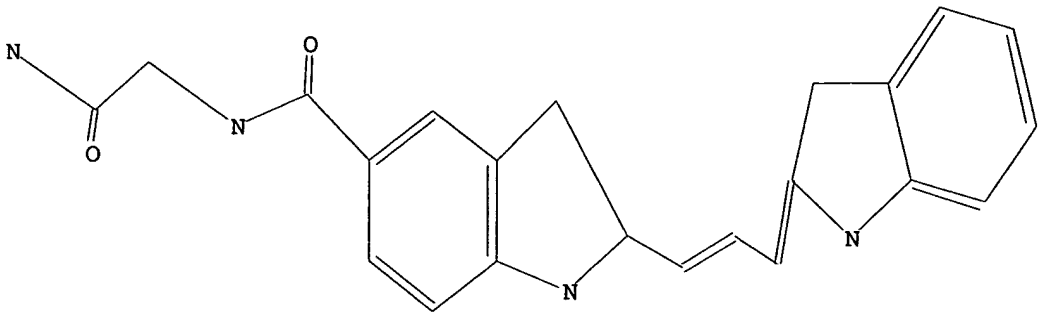
L3 STR



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SEARCH TIME: 00.00.01

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